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Surgical Abdominal Emergencies in Patients with HIV Infection: Epidemiological and Therapeutic Aspects in Hospital Prefecture of Siguiri

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Abstract

Important public health problem in terms of morbidity and mortality. The aim of this work is to determine the frequency, clinical and therapeutic aspects of abdominal emergencies associated with HIV at the prefecture hospital of Siguiri.

***Methodology:** We had carried out a 6-month descriptive prospective study from July 1 to December 31, 2018.*

All patients admitted and operated on for abdominal emergencies associated with HIV were included in the study.

The other patients were excluded from the study.

The study variables were epidemiological, clinical and therapeutic.

***Results:** For a period of 6 months, 88 patients were admitted for surgical abdominal emergencies, among them 22(or 25%)were investigated for abdominal emergencies associated with HIV, at the prefecture hospital of Siguiri. The study focused on 14(63.64) women and 8 (36.36)MenInthis group 11 women were married, 6 single, 4 widows, and 1 woman divorced. Depending on the type,According to the levels of education, 10 patients had no level either, 45.45%, meanwhile, 7 patients or 32.82% had secondary level, while 5 patients were 22.73% possessed the higher level. HIV 1 was the most represented with 77.27%, followed by HIV 2 with 22.72%..We had performed appendectomy in 17 patients, peritonitis by gastric perforation in 5 patients, peritonitis by ileal perforation in 2 patients, Hernioraphia in 3 patients, debridement in 2 patients. The postoperative operations were simple in 10 patients and complicated with parietal suppuration in 8 patients, and stercoral fistulas in 1 patient. Unfortunately, we had recorded 3 cases of death.*

***Conclusion:** Surgical abdominal emergencies in HIV-infected patients occupy an important place in surgical pathologies because of their frequency. The etiologies are diverse and remain dominated by appendicitis*

Keywords: *Abdominal emergencies, HIV, Siguiri Hospital.*

Introduction

The surgical emergency is a major public health problem in terms of morbidity and mortality [1]. She concerns all patients admitted to emergency rooms and for whom a surgical intervention decision may be required within 24 hours [2]. The WHO defines abdominal surgical emergencies as abdominal pain that has developed for a few hours or a few days (less than three) and that is related to a surgical pathology, requiring emergency treatment [3]. It is a frequent reason for consultation and hospitalization [4].

HIV infection today poses a great threat to humanity. In 2018, 37.9 million people were living with HIV world wide, including 24.7 million in sub-Saharan Africa [5].

According to Spectrum-Guinea 2015 estimates (UNAIDS / WHO / UNICEF), Guinea would be at 140,995 PLWHA with ART needs of 129,672 (adults and children living with HIV) in the year 2020 [6].

Surgical emergencies in HIV-infected patients are a health problem in developing countries [7]. The quality of life of the HIV-infected population has improved significantly in recent years. However, the prevalence of surgical procedures among PLHIV is increasing [8]. As evidenced by certain statistics:

A study by Etienne BO et al. [10] in 2008 on The early fate of patients with abdominal surgery in countries with a high density of AIDS infection at the University Clinics of Lubumbashi (DRC) and at the Teaching Hospital in Lusaka (Republic of Zambia) reported a 46.33% seroprevalence of UAC / PLWHA. Ewane. [11] in Yaoundé in 2003 in its study found that the UAC / PVVIH represented 12.7% of the emergencies of the Central Hospital of Yaoundé.

Boukindaet al. [12] in Brazzaville in 1992 reported 20.9% of UAC / PLHIV.

In Guinea, Doumbouya M [13] in 2016 at Ignace Deen national hospital, by Loua [3] in 2014 in Coyah, by Malick Y [14] in 2011 in Ignace Deen respectively reported seroprevalences of 14%; 24.90%; 4.49% surgical abdominal emergencies in HIV-infected patients.

Indeed, since the discovery of HIV, numerous publications have appeared on the subject, but those dealing with its relationship with surgery are the least numerous [9].

It is in order to fill this void at the prefecture hospital of SIGUIRI that we carried out this study.

Methodology

Material

We were interested in surgical abdominal emergencies in patients infected with the human immunodeficiency virus (HIV) during the study period.

For data collection, we used the following supports:

-The registers of consultations;

- medical records;

- Hospital records;

- registers of operating protocols;

A pre-established collection form.

Methods

Type and Duration of Study

It was a prospective, transversal and descriptive study lasting six months (6 months), going from July 01 to December 31, 2018.

Target Population

We targeted all patients admitted and operated on for surgical abdominal emergency in the general surgery department during the study period.

Study Population

The study focused on patients operated on for surgical abdominal emergencies infected with the human immunodeficiency virus (HIV) during the study period.

Selection Criteria

Inclusion Criteria: We included in our study all patients of all ages, genders, all sources and all professions admitted and operated for surgical abdominal emergencies infected with the human immunodeficiency virus (HIV).

Non-Inclusion Criteria: We were not included in our study, the patients:

- died before the intervention. The patients ;

- the SRV was negative;

-Traumatic abdominal emergencies.

Variables of study were epidemiological, clinical and therapeutic.

Results

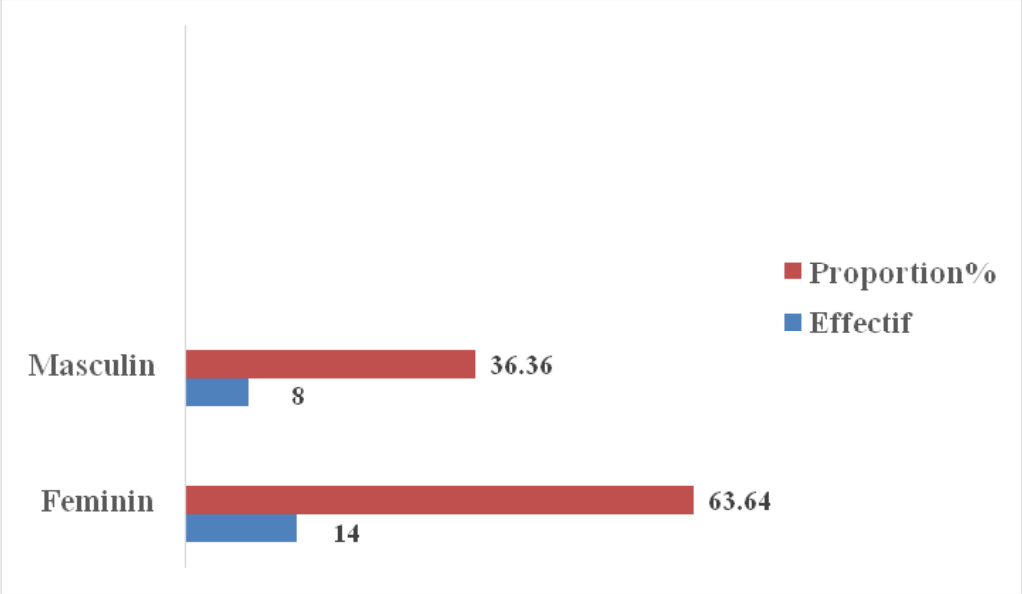

Figure1. *Distribution of patients by sex*

Table1. *Distribution of patients according to marital status*

Marital status	*Effective*	*Proportion%*
Married)	*11*	*50.00*
Singles	*6*	*27.27*
Want (Fr) fs	*4*	*18.18*
Divorcee)	*1*	*4.55*
Total	*22*	*100.00*

Table2. *Distribution of patients by place of provenance and place of residence*

Place of Provenance	*Effective*	*Proportion%*
Health structure	*15*	*68.18*
Home *Place of residence*	*7* *Effective*	*31.82* *Proportion*
Rural area	*13*	*59.09*
Urban area	*9*	*40.91*

According to the levels of education, 10 patients had no level either, 45.45%, meanwhile, 7 patients or 32.82% had secondary level, while 5 patients were 22.73% possessed the higher level.

Table3. *Distribution of patients according to the duration of evolution*

Evolution time	*Effective*	*Proportion%*
Beyond 72 hours	*12*	*54.54*
Between 24H and 72H	*10*	*45.45*
Less than 24H	*0*	*00.00*
TOTAL	*22*	*100.00*

Table4. *Distribution of patients according to surgical ATCD*

ATCD surgical	*Effective*	*Proportion%*
No	*16*	*72.72*
Inguinal hernia	*3*	*13.63*
Appendicitis	*2*	*9.09*
Bowel obstruction	*1*	*4.54*
Total	*22*	*100.00*

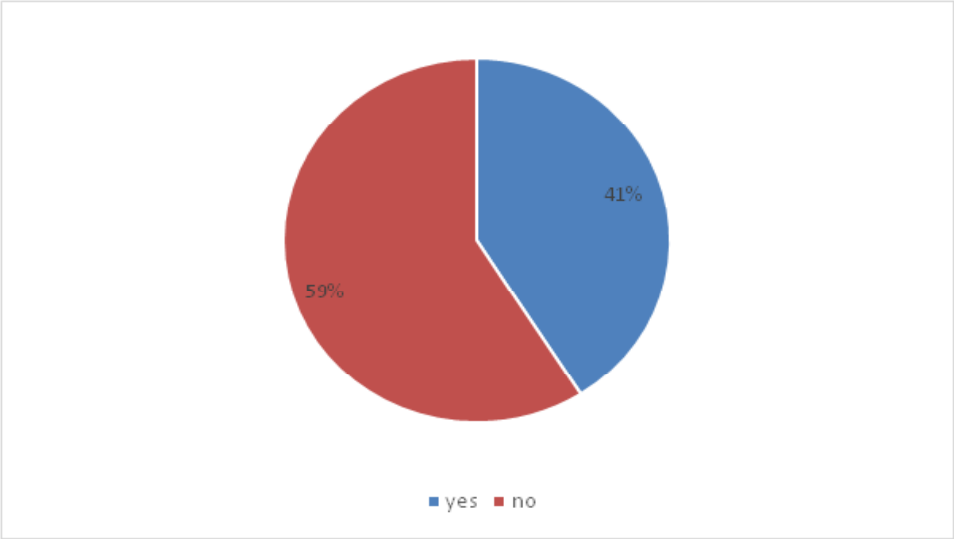

Figure2. *Distribution of patients according to knowledge of HIV status*

Table5. *Distribution of patients by type of HIV*

Type	*Effective*	*Proportion%*
Type I	*17*	*77.27*
Type II	*5*	*22.72*
TOTAL	*22*	*100.00*

Distribution of patients according to operative diagnosis

Abdominal pathology	*Effective*	*Proportion%*
Appendicitis	*9*	*40.09*
Peritonitis	*7*	*31.82*
Hernia	*3*	*13.63*
OIA	*3*	*13.63*
TOTAL	*22*	*100.00*

TableXV. *Distribution of patients according to postoperative medical treatment*

Treatment	*Effective*	*Proportion%*
Infusion + ATB + Analgesic	*22*	*100.00*
NSAIDs	*6*	*27.27*
Transfusion	*2*	*9.09*

Table6. *Distribution of patients according to the operating suite*

Operating suites		*Effective*	*Proportion%*
Favorable		*10*	*45.45*
Complications	*Parietal suppuration*	*8*	*36.36*
	Stercoral fistulas	*1*	*04.54*
Death		*3*	*13.63*
Total		*22*	*100*

Discussion

We touched on a sensitive subject in a geographically selective area for HIV infection. Our study certainly has limits, however, it remains of great interest, and has enabled us to highlight the prevalence of surgery in patients infected with HIV.

Frequency

During the study period we recorded 221 consultations; 112 surgical procedures including 88 emergencies, ie 78.57% abdominal surgical emergencies.

This result is higher than that reported by Diallo [15] in 2013 at Donka National Hospital and that reported by Aïssatou [16] in 2017 Ignace Deen National Hospital who found a proportion of 35% and 16.32% respectively. abdominal surgical emergencies.

This difference would be due to the delay in consulting patients who would pass through other primary health facilities before arriving at our referral structure.

Out of 88 abdominal surgical emergencies, we recorded 22 cases infected with HIV, ie a seroprevalence of 25%. Our result is much higher than those reported by Ngowe et al. [7] in Cameroon in 2003 and Sagara [17] in Mali in 2014 who reported respectively 6% and 12.7% seroprevalences.

Furthermore in Bangui Antoine DD. et al. [18] in 2002 and Dieng et al. [9] in Dakar in 2007 noted a respective frequency of 23.6% and 11.50%.

This very high frequency in our study confirms the data in the literature which shows a high density of PLWHA in border towns on the main roads in the South and Northeast and Certain mining sub-prefectures (Spectrum 2015).

Sociodemographic Aspects

Age

At the end of our study, the age group of 20-45 years with an average of 34 years.

Our result is close to that of Etienne BO et al. [10] in the DRC and Zambia in 2008 found an average age of 32 years.

This result could be explained by the fact that this young age is the segment of the population most affected by HIV infection in sub-Saharan African countries linked to the precocity of sexual intercourse as well as the lack of education. sexual. And This is a reflection of our demography where the age pyramid is broadly based [4-13].

Sex

The female sex was the most affected with a sex ratio of 1.75. Our result is contrary to those reported by Hammound et al. [19] and Loua at the Coyah prefectural hospital in 2014 [3] who found 5.8 and 1.2 respectively in favor of the male sex.

This result confirms the data from the literature which states that the vaginal mucosa and the surface of the cervix multiply the risks of contamination. In addition, the concentration of the virus is higher in semen than in vaginal secretions [20].

The Profession

At the socio-professional level, minors were the most affected with 31.80% followed by housewives and shopkeepers with similar rates of 27.30%. These results are different from those of Ewane in Cameroon in 2003 [11] and Doumbouya in 2016 at the Ignace Deen National Hospital [13] which reported 41% for pupils and 45.46% for traders respectively.

The privileged impact of this layer in our study could be explained by the fact that the study was carried out in a mining area.

Marital Status

Among our patients, the married and the unmarried were the most represented with respective frequencies of 50% and 27.27% while the divorced and the widowed (Ve) s were the least represented with respective rates of 4.15%, 18.18%.

Sagara [17] in Mali in 2014 also reported a predominance of married couples followed by singles with frequencies of 58.2% and 28%.

These results could be explained on the one hand by contractual and temporary marriages in mining areas like SIGUIRI and on the other hand by risky sexual behavior, namely multiple sexual partners, frequentation of sex workers and occasional sexual intercourse.

Residence

Fifty-nine point zero nine percent (59.09%) of the patients were from rural areas.

Educational Level

Patients with no education level were the most represented in our study followed by secondary level with respective proportions of 45.45% and 31.82%

Knowledge of HIV Status

In our series 41% of the patients knew their HIV status among which 66.66% were on ARV treatment against 33.33% who were not on ARV. This result goes in the same direction as that reported by Etienne et al. [10] in 2008 who showed 70.96% of the patients who were on ARV against 29.03% who were not on ARV.

This result confirms data from UNAIDS which estimates that at the end of June 2019 24.5 million people living with HIV had access to antiretroviral treatment [5].

Type of HIV

In our study, 77.27% of patients were carriers of type I against 22.72% of type II. This result is close to that reported by Doumbouya in [13] 2016 to the Ignace Deen national hospital which found 80.30% of type I and 19.7% of type II

Our result confirms the literature which indicates that the predominance of the type varies according to the geographical area. Type I represents the most common form in sub-Saharan Africa [20]. Dieng et al. [9] in Senegal reported that most of the infected patients were type I.

Antecedent

In our series, patients with no previous surgical history were the most present followed by that of inguinal hernia with 72.72% and 13.63% respectively.

Origin

In our study, the majority of patients transited in a hospital structure with a rate of 68.18%.

This could be explained by the proliferation of private clinics in the prefecture of SIGUIRI, so in case of emergency patients consult in the nearest structures.

Reason for Consultation

In the study, the clinical picture was dominated by abdominal pain with a proportion of 100%. However, fever, vomiting and abdominal bloating were observed in 77.27%, 63.63%, and 31.81% of patients, respectively. Our result can be superimposed on that of Soumah et al. [23] in 2016 in Senegal who observed 100% for abdominal pain and 90.90% for vomiting.

This result would be explained by the fact that abdominal pain is the main symptom before all abdominal surgical emergencies. The other signs depend on the etiology and the stage of the disease.

Consultation Period

The majority of our patients consulted in a 24-72 hour time interval, i.e. 54.54%. Guerrout Hanane and Hamaili Dalila [27] in 2017 in Algeria reported that 36.36% of patients who consulted in the 12h-24h interval. These results explain the fact that most of our patients used self-medication, traditional healers. But also due to the lack of financial means available in emergency to ensure the cost of care.

In Gabon socio-economic problems were responsible for 75.5% of the delays in taking charge of the interventions. [28].

Physical Signs

The main physical signs highlighted in our series were defense or abdominal contracture (81.01%). This could be explained by the fact that the dominant diagnoses (appendicitis, peritonitis, intestinal obstruction, strangulated hernias) correspond to these physical signs.

Biological Examination

All our patients benefited from a preoperative biological assessment, ie 100%. Fortunately, the biological examination remains the last most available para-clinical examination at any time within the Prefecture Hospital of Siguiri. Our result is comparable to that of Barsing D D. [26] in his study which found that all the patients benefited from an emergency preoperative biological assessment.

Imagery

The Abdomen without Preparation (ASP) and Ultrasound

In our study of 22 patients, only 3 did an ultrasound (13.63%). The PSA could not be done in any of our patients. Our results are similar to that reported for Loua in 2014 in Coyah with 24.62% for ultrasound and none performed the ASP [3].

The lack of X-ray of the ASP and the low rate of completion of the ultrasound would be explained in our context, not only by their rarity in emergency, but also by the lack of qualified personnel.

Diagnostic

In our study appendicitis and peritonitis largely dominated our pre and per operative diagnoses with respective proportions of 40.09% and 31.82% preoperatively. This result can be superimposed on that reported by Cissé [24] at the Medico-surgical Center of the Armed Forces / BQG of Conakry who found proportions of 81.01% for appendicitis, 10.08% for peritonitis. These results could be explained by the fact that appendicitis and peritonitis constitute the most frequent abdominal surgical emergencies.

Type of Anesthesia

General anesthesia was used exclusively during our study with a frequency of 100%.

This could be explained by the choice of the surgeon on the type of anesthesia and the lack of qualified personnel for locoregional anesthesia.

Pick-Up Time

The average time between patient admission and surgery of 8.11 hours is consistent with that of Magagi et al. in Niger in 2016 [4] who found 9.13 hours.

This delay is the result of the time necessary to carry out the paraclinical examinations, the availability of blood products, the acquisition of the operating kit which is the responsibility of the patient in our structure and the establishment of a preoperative resuscitation including the duration depends on the clinical condition of the patient. A Nigerian study in 2010 found the same parameters involved in therapeutic delay [21]. Although there is not yet a consensus on a standard timeframe for the management of the main emergency surgical pathologies, Leppäniemi [22] advises not to exceed two hours of preoperative resuscitation for generalized peritonitis for example.

The Ways First

During our period of study, the most practiced approach was that of the mid and umbilical median, 45.45%, followed by Mac Burney and the inguinal path, 40.09% and 13.63%, respectively. first in our context are related to diagnostics

The Surgical Gesture

The appendectomy was the most performed surgical procedure in our patients or 77.27% followed by suturing a gastric perforation and hernia repair, respectively 22.72% and 13.63%. This result would explain the predominance of appendicitis in our series.

Etiology of Peritonitis

Gastric perforation 57.14% was by far the most common cause of peritonitis. This result is contrary to

that reported by Ouangre E et al. [25] in Burkina found a proportion of 42.5% for intestinal perforations of typhic origin.

This could be explained by the misuse and undocumented non-steroidal anti-inflammatory drugs in states of physical asthenia and or pain.

Pre, Per and Postoperative Medical Treatment

We used ATB and analgesics in all patients; infusions of Ringer lactate, isotonic saline and isotonic glucose serum in 59.09% of patients and NSAIDs in 27.72% of patients in preoperative treatment.

This same therapeutic arsenal has been observed with different proportions.

This justifies the importance and place of medical treatment in the management of post-operative abdominal surgical emergencies.

The Operating Suites

Favorable

During our study period 45.45% of our patients had a simple operating suite. Our result is lower than that of Soumah et al. in Senegal [23] 85.24% of simple operating suite.

Morbidity

Operative morbidity was 40.90% dominated by infection of the operative site with 36.36%

This would be linked:

- Unfavorable terrain

- And sometimes the patient's state of hygiene, sometimes unsatisfactory aseptic conditions and interventions carried out in emergency situations.

Lethality

We recorded three (3) cases of death, ie a mortality rate of 13.63%. This series is superior to that of Bio Tamou Sambo et al. [29] 11.3% and lower than that reported by Hammoud et al. [19] who found a mortality rate of 21.21%.

The mortality rate in fact depends on the patient's condition, the earliness of treatment but also the etiology of the pathologies.

Duration of Hospitalization

In our study, 45.45% of patients had a hospital stay between 0 to 5 days and the average duration was 7 days. This result is close to that of Sagara [17] in 2012 in Mali, which reported an average duration of 8 days, but is still lower than that reported by Loua [3] in 2014 at the Coyah prefectural hospital, which found a duration 12 day average. The average length of hospital stay depends on the therapeutic modality and the occurrence of complications.

Conclusion

Surgical abdominal emergencies in HIV-infected patients occupy an important place in surgical pathologies because of their frequency. The etiologies are diverse and remain dominated by appendicitis.

The diagnosis is essentially clinical.

Complementary examinations in our context, in particular imagery, are difficult to access in emergencies and have little contribution.

The care is varied and requires multidisciplinary collaboration.

The prognosis can only be improved by early diagnosis and rapid intervention before the occurrence of any complications.

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